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CORP., MATROX TECH, INC. and AEROFLEX  
COLORADO SPRINGS, INC.

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN FRANCISCO DIVISION

RICOH COMPANY, LTD.,

Case No. C03-04669 MJJ (EMC)

**Plaintiff,**

vs.

AEROFLEX INCORPORATED, et al.,

## Defendants.

**SYNOPSYS' AND CUSTOMER  
DEFENDANTS' NOTICE OF MOTION AND  
MOTION FOR SUMMARY JUDGMENT OF  
LACHES DEFENSE**

**[SUMMARY JUDGMENT MOTION NO. 8]**

Date: September 26, 2006  
Time: 9:30 a.m.  
Courtroom: 11, 19<sup>th</sup> Floor  
Judge: Martin J. Jenkins

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## **NOTICE OF MOTION AND MOTION**

Please take notice that, on September 26, 2006 at 9:30 a.m., before the Honorable Martin J. Jenkins in Courtroom 11, 19th Floor, in the United States District Court, 450 Golden Gate Avenue, San Francisco, California, Defendants Aeroflex Incorporated (“Aeroflex”), AMI Semiconductor, Inc. (“AMI”), Matrox Electronic Systems, Ltd. (“Matrox Electronics”), Matrox Graphics, Inc. (“Matrox Graphics”), Matrox International Corp. (“Matrox International”), Matrox Tech, Inc. (“Matrox Tech”) and Aeroflex Colorado Springs, Inc. (“UTMC”) (collectively the “Customer Defendants”) will each seek a judgment from the Court, pursuant to Rule 56 of the Federal Rules of Civil Procedure, that Ricoh Company, Ltd. (“Ricoh”) is not entitled to its claims for damages for Customer Defendants’ alleged infringement of U.S. Patent No. 4,922,432 (“the ‘432 patent”) occurring prior to the filing of this suit. This motion is based upon the following memorandum of points and authorities, the accompanying declaration of Denise M. De Mory, the oral arguments of counsel at the hearing on this motion, and all other pleadings and matters of record in this action.

## **MEMORANDUM OF POINTS AND AUTHORITIES**

15 | I. INTRODUCTION

16       Ricoh waited for almost 13 years after the issuance of the '432 Patent to sue the Customer  
17 Defendants for patent infringement. Because the Customer Defendants' alleged infringement was  
18 known or should have been known to Ricoh for more than six years before filing suit, the doctrine of  
19 laches bars Ricoh's recovery for all pre-filing damages.

## 20 || II. STATEMENT OF FACTS

21 The patent in suit issued on May 1, 1990. Ricoh brought this infringement suit against the  
22 Customer Defendants on January 21, 2003, alleging infringement of the '432 patent based on  
23 Customer Defendants' sale of application specific integrated circuits ("ASICs") that were designed  
24 with Synopsys' Design Compiler system, which includes Design Compiler, HDL Compiler for  
25 Verilog, VHDL Compiler, and the DesignWare libraries ("products in suit"). Ex. 65.<sup>1</sup> The claims

<sup>27</sup> <sup>28</sup> <sup>1</sup> Unless otherwise noted, all exhibits referenced in this motion are attached to the Declaration of Denise M. De Mory In Support of Synopsys' and Customer Defendants' Summary Judgment Motions filed concurrently herewith. All deposition references are likewise included in the De Mory Declaration.

1 asserted by Ricoh claim a six-step method comprising three storing steps, and then three additional  
 2 steps: describing, specifying, and selecting. The preamble of the claim requires that the system be  
 3 used for ASIC design.

4       Ricoh's infringement contentions allege that software licensed from Synopsys and used by the  
 5 Customer Defendants performs all of the steps of the asserted claims except the describing step. *See*  
 6 *e.g.*, Ex. 4. Specifically, the Synopsys Design Compiler system is identified in Ricoh's infringement  
 7 contentions as performing five of the six limitations of the asserted claims. *Id.* For the describing step,  
 8 Ricoh contends the limitation is met because "the ASIC Designer entered a written description of the  
 9 desired functions of the ASIC Product into HDL Compiler for Verilog." *See id.* Ricoh alleges that the  
 10 Verilog and VHDL ASIC designs that include HDL operators, including, for example +, \*, -, /, >, <  
 11 and "if," "case," and "wait" statements, comprise "architecture independent actions and conditions,"  
 12 which, when input by the Customer Defendants into the Synopsys products in suit, fulfill the  
 13 describing step and thus infringe the '432 patent. *See id.*

14       However, Ricoh and ICC have known since as early as 1989 that Design Compiler accepts  
 15 Verilog HDL inputs. In 1989, Hideaki Kobayashi, the co-inventor of the '432 patent and then-  
 16 president of ICC, wrote a guest editorial in the International Journal of Computer Aided VLSI Design.  
 17 Ex. 66. In his editorial, Kobayashi included a table of "Commercial Logic Synthesis Software." *Id.* at  
 18 KBSC001114. This table lists nine logic synthesis software products and conspicuously includes  
 19 Synopsys' Design Compiler product, as well as additional details regarding Design Compiler's inputs  
 20 and design style. *Id.* at KBSC001114. Notably, the article indicates that Design Compiler accepts  
 21 HDL (Verilog) inputs. *Id.*

22       Moreover, on October 22, 1990, Ricoh licensed the Design Compiler and HDL Compiler for  
 23 Verilog from Synopsys.<sup>2</sup> Ex. 67 at 2SP0708285). Between 1990 and 1996, Ricoh entered into over 40  
 24 contracts with Synopsys for the licensing or support of the products-in-suit. Ex. 68. The co-owner of  
 25  
 26

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27       <sup>2</sup> Ricoh entered into a contract with SC High-Tech Center Corp. ("HSC"), which was the general agent of Synopsys in  
 28 Japan. HSC possessed the authority to license Synopsys products in Japan. Ex. 67 at 2SP0708275. For the sake of  
 simplicity in this motion, Customer Defendants refer to HSC as Synopsys.

1 the asserted patent, KBSC, also took a license from Synopsys in July of 1993, and renewed that license  
 2 in 1995 because of an expressed intention to work on interoperability so that its flow chart behavioral  
 3 input programs could work as a front end to Synopsys' RTL tools. Ex. 69 at SP00001-SP00032.

4 As licensees, both Ricoh and KBSC received product manuals as well as access to other  
 5 Synopsys resources regarding the steps performed by the Synopsys product and how the products  
 6 work. The Synopsys manuals described in detail how customers could use the Synopsys Verilog HDL  
 7 Compiler tool to design integrated circuits. *See* Ex. 70. As early as 1988, Synopsys' product manual  
 8 highlighted the use of HDL in describing system architectures. *Id.* at SP04443. The 1988 product  
 9 manual also detailed the use of HDL operators in HDL Compiler for describing the application  
 10 functionality of the ASIC using a series of mathematical expressions and conditions. *See id.* at  
 11 SP04459-4485.

12 Moreover, the widespread use of Synopsys' HDL Compiler was known to the general public.  
 13 In January of 1990, Synopsys' HDL Compiler won a product of the year award. Ex. 71. The article in  
 14 which the award was bestowed on Synopsys stated that “[d]esigners have so enthusiastically embraced  
 15 the [Synopsys] HDL Compiler that it has become a de facto standard.” *Id.* at SP04650. Synopsys  
 16 documentation from 1989 entitled “Synopsys ASIC Partnerships” also illustrates the wide use of  
 17 Synopsys’ product. Ex. 72. In 1991, a book was published by Synopsys describing the use of Design  
 18 Compiler to do what Ricoh alleges infringes the patent. Ex. 21. Moreover, by 1997, the year in which  
 19 presumptive laches is triggered in this case, Synopsys had at least an 81% share of the logic synthesis  
 20 tool market, according to San Jose market research firm Dataquest.

21 Although not critical to this motion given the nature of Ricoh’s claim in this case, *i.e.*, that  
 22 anyone who uses HDL arithmetic operators as input to the Synopsys tools infringes the patent, the  
 23 Customer Defendants’ personal use of the Synopsys Design Compiler was open and notorious.  
 24 Matrox Electronics and AMI were featured in prominent computer design magazines as users of  
 25 Synopsys’ Design Compiler. In 1990, Electronic Engineering Times reported on Matrox Electronics’  
 26 use of Synopsys’ synthesis tools. Ex. 74. In 1991, Electronic News reported on AMI’s development  
 27 of cell libraries for use with Synopsys’ Design Compiler product. Ex. 75. Additionally, numerous  
 28 press releases mentioned the Customer Defendants’ use of several other Synopsys products. Ex. 76.

1       The Customer Defendants' and Synopsys' websites also showed that the Customer Defendants  
 2 were designing ASICs using Synopsys software well before the critical laches date of January 1997.  
 3 The AMI website from 1996 claims that AMI "literally pioneered the ASIC industry, introducing the  
 4 first customer integrated circuits to the marketplace in 1966." Ex. 77. The AMI site also discloses that  
 5 AMI Design Kits support EDA tools from vendors such as Synopsys. Ex. 78. The Aeroflex website (at  
 6 the time under the company's former name, UTMC) contains a November 28, 1995 press release in  
 7 which UTMC announced the introduction of its VHDL design kits to enhance customers' VHDL-  
 8 based ASIC designs and systems. Ex. 79. On November 6, 1996, UTMC announced a new gateway  
 9 family supported by Synopsys and VHDL tools on HP and Sun Workstations.

10       The Synopsys website from 1997 contains a list of Synopsys Semiconductor Vendor Program  
 11 participants, or companies who had developed strategic relationships with Synopsys to take full  
 12 advantage of ASIC technology advancements. Ex. 80. The list of participants on the Synopsys  
 13 website who offered libraries for use with the Synopsys products included AMI and Aeroflex (then  
 14 called UTMC). Ex. 81.

15       Ricoh waited until January 21, 2003 to file a claim for patent infringement against the  
 16 Customer Defendants, notwithstanding the plethora of publicly available information from which one  
 17 could easily determine that the Customer Defendants were designing ASICs using the Synopsys  
 18 Design Compiler product (and thus, under Ricoh's theory, were infringing the '432 patent).

19 **III. ARGUMENT**

20       There is no excuse for Ricoh waiting almost 13 years to bring an infringement claim against the  
 21 Customer Defendants—more than twice the length of time required for the presumption of laches to  
 22 apply. Ricoh undeniably knew of the allegedly infringing products in suit because it entered into over  
 23 40 licensing agreements with Synopsys for these same products from 1990 through 1997 (the  
 24 presumptive laches date). Ricoh's infringement contentions are essentially that any ASIC designer that  
 25 puts a "+" into HDL Compiler infringes, and through its own use of the Synopsys tools, Ricoh knew  
 26 that any designer who used these tools would do so.

27       In addition, the documentary evidence is undeniable—Ricoh knew (or upon reasonable  
 28 diligence should have known) that the Customer Defendants were designing ASICs using the

1 Synopsys accused products prior to 1997. The sheer volume of publicly available information  
 2 regarding the Customer Defendants' activities belies any claim by Ricoh to the contrary. Therefore,  
 3 the issue before this Court boils down to whether or not Ricoh can excuse its 13-year delay. It cannot.  
 4 Ricoh has not been involved in the demands of other litigation and cannot otherwise justify its delay.  
 5 Ricoh should not be permitted to sit on its rights, all the time allowing the potential damages to  
 6 accumulate for 13 years before seeking to enforce its patent.

7       **A. Legal Standard for Summary Judgment**

8       Summary judgment should be granted when "there is no genuine issue as to any material fact"  
 9 and the "moving party is entitled to judgment as a matter of law." FED. R. CIV. P. 56(c). Once a party  
 10 has made an initial showing that summary judgment is warranted, the opposing party may not rest  
 11 upon pleadings; rather, "the non-moving party must 'designate specific facts showing that there is a  
 12 genuine issue for trial.'" *Tinoco v. Belshe*, 916 F. Supp. 974, 979 (N.D. Cal. 1995) (quoting *Celotex*  
 13 *Corp. v. Catrett*, 477 U.S. 317, 324 (1986)). Summary judgment is available in patent cases the same  
 14 as in any other case. *See Barmag Barmer Maschinenfabrik AG v. Murata Mach., Ltd.*, 731 F.2d 831,  
 15 835 (Fed. Cir. 1984).

16       **B. Legal Standard for Laches**

17       The equitable principle of "laches" bars recovery of damages that accrued before suit was filed  
 18 where the patentee unreasonably and inexcusably delayed in filing suit and the accused infringer is  
 19 harmed by the delay. *See A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1028-29,  
 20 1041 (Fed. Cir. 1992). Laches is an equitable defense to be resolved by the Court in light of all the  
 21 circumstances including the length of the delay and the justification for the delay offered by the  
 22 patentee. *Id.* at 1032.

23       If the patentee's delay in filing suit is more than six years—measured from the time that the  
 24 patentee knew or should have known of the alleged infringement—the underlying critical factors of  
 25 laches are presumed, barring pre-filing recovery. *Id.* at 1035-36. In other words, when a six year  
 26 delay is established, the delay is presumed to be unreasonable and prejudicial to the defendant. *Id.* To  
 27 overcome a presumption of laches, the patentee must introduce contrary evidence justifying its delay in  
 28 bringing suit or demonstrating that the defendant was not prejudiced by the delay. *Id.* at 1028. Patent

holders are charged with a duty to police their patent rights. *See Wanlass v. Fedders Corp.*, 145 F.3d 1461, 1466 (Fed. Cir. 1998) (stating that while the plaintiff did not have to police an entire industry, it did have a duty to investigate a particular product if and when publicly available information about it should have led the plaintiff to suspect that product of infringing plaintiff's patent). Therefore, excuses for a delay in bringing suit must be more than willful ignorance and may include the demands of other litigation, negotiations with the accused infringer, and disputed ownership of the patent. *See Aukerman*, 960 F.2d at 1033.

### C. Ricoh's Delay Creates A Presumption Of Laches.

The Customer Defendants are clearly entitled to the laches defense. There is a presumption of laches where there is a delay of more than six years in filing suit. *Aukerman*, 960 F.2d at 1037 (stating that unreasonable delay and prejudice must be inferred from a six-year delay in filing suit and actual or constructive knowledge of alleged infringement).

Ricoh knew about the Synopsys products thirteen years prior to filing the lawsuit. In fact, Ricoh first entered into a licensing agreement with Synopsys for the very product it now accuses of infringement at least as early as October 22, 1990, shortly after the '432 patent issued.<sup>3</sup> As a licensee, Ricoh received Synopsys documentation showing in detail how to use the products to design integrated circuits, including describing system functionality using HDL operators. *See Ex. 70.*

Based on its use of the Synopsys tools, Ricoh knew that anyone who uses HDL Compiler and Design Compiler to do what they are intended to do, (i.e., design ASICs by synthesizing logic from HDL descriptions that include basic HDL operators, such as "+"), would allegedly infringe this patent. Therefore, at the time it licensed the Synopsys products, Ricoh had all the information it needed (or at least the same information it had when it filed suit) to analyze any potential infringement by users of the Synopsys product. In fact, Hideaki Kobayashi, the co-inventor of the patent, listed Synopsys' Design Compiler as one of nine example logic synthesis software products in his 1989 guest editorial

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<sup>3</sup> KBSC also licensed the accused Synopsys products in 1993.

1 in the International Journal of Computer Aided VLSI Design. Ex. 66. Ricoh obviously relied on this  
 2 precise information in filing suit in this case.

3 By 1997, Ricoh also should have known that the accused Synopsys tools had become the de  
 4 facto standard in ASIC design. As Synopsys had more than an 80% market share, Ricoh should have  
 5 known that it was highly likely that the Customer Defendants were using Synopsys tools. In addition,  
 6 by 1997, there was significant publicly available information that the Customer Defendants themselves  
 7 were specifically using the Synopsys tools for ASIC design on the Synopsys and Customer Defendant  
 8 websites, as well as in press releases.

9 Based upon the foregoing facts, the Customer Defendants have a *prima facie* defense of laches.  
 10 There is no question that Ricoh knew of the allegedly infringing products in suit, and should have  
 11 known that the Customer Defendants were using these products more than six years prior to when it  
 12 filed the lawsuit. Ricoh's delay is, therefore, presumptively prejudicial to the Customer Defendants.  
 13 *Aukerman*, 960 F.2d at 1037. This prejudice has been apparent in this case by the difficulty in  
 14 gathering evidence from twenty years ago.

15 **D. Ricoh Knew Or Should Have Known About The Customer Defendants' Allegedly  
 16 Infringing Activities More Than Six Years Before Filing Suit.**

17 More than six years before filing the lawsuit, Ricoh knew or should have known of the alleged  
 18 infringement by the Customer Defendants in three ways.

19 First, since Ricoh commercially licensed the tools from 1990, it knew long before 1997 of its  
 20 allegedly infringing functionality. Ricoh's infringement claims in this suit boil down to: anyone who  
 21 uses HDL Compiler and Design Compiler to do what they are intended to do, i.e., design ASICs by  
 22 synthesizing logic from HDL descriptions that include basic HDL operators, such as "+", infringes this  
 23 patent. Because Ricoh used the Design Compiler system for ASIC design itself for more than a  
 24 decade, it knew long before it filed suit in 2003 that anyone who was using these Synopsys tools to  
 25 design ASICs was allegedly infringing this patent.

26 Second, industry information was widely available prior to 1997 indicating that HDL Compiler  
 27 and Design Compiler had become the "de facto" tools for doing ASIC design, with more than an 80%  
 28 share of the logic synthesis market. Thus, by 1997, if a company was doing ASIC design, there was

1 more than an 80% chance that it was doing it with the very tools that Ricoh claims infringe the patents  
 2 in suit. Therefore, Ricoh should have known that there was a high likelihood that the Customer  
 3 Defendants were designing their ASICs with the products in suit. Ricoh cannot claim ignorance  
 4 regarding the Customer Defendants' use of the Synopsys products in suit for ASIC design.

5       Third, Ricoh should have known by 1997 that the Customer Defendants used Synopsys'  
 6 products because their use was open and notorious. The Synopsys website from 1997 contained a list  
 7 of Synopsys Semiconductor Vendor Program participants, or companies who had developed strategic  
 8 relationships with Synopsys to take full advantage of ASIC technology advancements. Also, the  
 9 Customer Defendants had issued press releases and/or web pages noting their use of Synopsys'  
 10 software.

11       In *Hall v. Aqua Queen Mfg. Co.*, 93 F.3d 1548 (Fed. Cir. 1996), the Federal Circuit affirmed a  
 12 district court's granting of a defendant's summary judgment motion for laches. *Id.* at 1556. The court  
 13 held that the defendant's heavy advertising in trade magazines and attendance at the same trade shows  
 14 that the patentee attended were "conclusive evidence" that the patentee "should have known of the  
 15 accused infringer's open, notorious, and allegedly infringing activities more than six years prior to  
 16 filing suit." *Id.* at 1553. The evidence here is much more conclusive. With Ricoh's own licensing of  
 17 the Synopsys products in suit, Synopsys' market share of logic synthesis software, numerous press  
 18 releases on the Customer Defendants' use of Synopsys products, and information on Synopsys' and the  
 19 Customer Defendants' websites, Ricoh clearly should have known of Synopsys' allegedly infringing  
 20 products and the Customer Defendants' use of them.

21       **E. Ricoh's Thirteen Year Delay is Inexcusable.**

22       Having shown that all the information relied on by Ricoh to assert allegations of patent  
 23 infringement against the Customer Defendants has been known since 1990, and certainly more than six  
 24 years before Ricoh brought suit, a presumption of laches applies. Ricoh has not been engaged in any  
 25 type of protracted litigation that would justify any delay in bringing suit—let alone a 13-year delay.  
 26 Nor can Ricoh offer any other justification for its delay. Additionally, Ricoh cannot produce any  
 27 evidence that its delay has not prejudiced the Customer Defendants. In fact, it is obvious that the  
 28

1 Customer Defendants **have** been prejudiced – much evidence has been destroyed or lost, and memories  
 2 of key witnesses, including one of the named inventors of the patent, have faded.

3 The facts of this case are a classic example of the type of circumstances in which laches should  
 4 apply so as to hold a patentee responsible for either failing to police and assert its patent rights, or for  
 5 sitting quietly and waiting for damages to escalate before filing suit. Ricoh's delay is inexcusable and  
 6 any damages awarded should be limited to post-filing damages as a result of laches.

7 The Court should grant the Customer Defendants' motion for summary judgment and bar  
 8 Ricoh from recovering damages for any alleged infringement that occurred prior to January 21, 2003.  
 9 Therefore, any damages for the products in suit sold prior to the filing date are barred by laches. In  
 10 particular, the Matrox defendants are not liable for any damages because they have not synthesized any  
 11 ASICs after Ricoh filed this suit in 2003.

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20 **V. CONCLUSION**

21 For the foregoing reasons, this Court should grant Customer Defendants' Motion for Summary  
 22 Judgment of Laches.

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1 Dated: August 18, 2006

Respectfully submitted,

2 HOWREY LLP

3

4 By: /s/Denise M. De Mory

5 Denise M. De Mory

6 Attorneys for Defendants

7 AEROFLEX INCORPORATED, AMI  
8 SEMICONDUCTOR, INC., MATROX  
9 ELECTRONIC SYSTEMS, LTD.,  
MATROX GRAPHICS INC., MATROX  
INTERNATIONAL CORP., MATROX  
TECH, INC., and AEROFLEX  
COLORADO SPRINGS, INC.

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